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Equity and Community-Based Health Insurance: How does insurance coverage affect health seeking behavior among disadvantaged groups in India?

Hazel Hering
SIT Study Abroad

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Abstract

The objective of this study is to examine how Community-Based Health Insurance (CBHI) can promote equity by improving health seeking behavior across gender and geography. Using a CBHI scheme from the Self-Employed Women's Association (SEWA) as a case study, trends in claims filed between October 2016 and March 2017 are compared to the distribution of memberships in order to investigate whether health insurance coverage positively impacts health seeking behavior among disadvantaged groups, and what barriers to access exist when the burden of medical costs are reduced. This study concludes that the number of male and female claims in the sample is consistent with the distribution of gender in memberships. The average estimated cost of medical treatment is similar in size for males and females, as is the average percent of cost approved for reimbursement. Among patients below eighteen years of age, male members have a substantially higher hospitalization rate than female members. The number of claims filed from urban versus rural areas is consistent with the geographical distribution of memberships. However, urban members heavily outnumber rural members, and rural members tend to seek more expensive treatment and receive a lower percentage of treatment cost as a payout.

Table of Contents

1. Abbreviations

BPL	Below Poverty Line
CBHI	Community-Based Health Insurance
FIDES	Financial Systems Development Services
GDP	Gross Domestic Product
INCLEN	International Clinical Epidemiological Network
INR	Indian Rupees
IRDA	Insurance Regulatory and Development Authority
LIC	Life Insurance Corporation
MFI	Microfinance Institutions
NGO	Nongovernmental Organization
OOPE	Out-of-Pocket Expenditure
PHI	Private Health Insurance
RSBY	Rashitriya Swasthya Bima Yojana
SEWA	Self-Employed Women's Association
SHI	Social Health Insurance
UHC	Universal Health Coverage
UIIC	United India Insurance Company
USD	United States Dollars

2. Introduction

With 80% of medical costs in India covered by out-of-pocket expenditure, financial barriers pose a substantial threat to accessing treatment.[1] Approximately 39 million Indians fall below the poverty line each year due to health-related costs.[2] Because public health expenditure accounts for only 1.4% of GDP, and no more than a quarter of the population is covered under any type of insurance,[3] supplementary health financing programs are essential if India is to make progress towards its goal of Universal Health Coverage (UHC).[4]

As of 2010, government-based health insurance schemes cover nearly 15% of the Indian population. The remaining coverage falls under Social Health Insurance (SHI), Private Health Insurance (PHI), and Community-Based Health Insurance (CBHI).[5] Government sponsored schemes face a myriad of challenges in implementation. Targeted populations suffer from high rates of illiteracy and low levels of schooling, which leads to difficulties in operational modalities and claim submission. The voluntary nature of the schemes, as well as a lack of visible benefits and incentives, results in low enrollment rates and consequent adverse selection, a term that refers to the disproportionate enrollment of high-risk individuals. At the state level, staff in charge of increasing coverage are often overworked and burdened with other tasks.[6] SHI

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[1] Bhaskar Purohit, "Community Based Health Insurance in India: Prospects and Challenges," *Health* 6 (2014): 1237-1245, http://www.scirp.org/journal/health.

[2] Yarlini Balarajan, S Selvaraj, SV Subramanian, "Health care and equity in India," *Lancelot* 377.9764 (2011): 505-515, doi: 10.1016/S0140-6736(10)61894-6.

[3] Bhaskar Purohit, "Community Based Health Insurance in India: Prospects and Challenges," *Health* 6 (2014): 1237-1245, http://www.scirp.org/journal/health.

[4] Health Expenditure, total (% GDP), World Bank Database, 2014.

[5] Bhaskar Purohit, "Community Based Health Insurance in India: Prospects and Challenges," *Health* 6 (2014): 1237-1245, http://www.scirp.org/journal/health.

[6] Mita Choudhury, R. Srinivasan, "A Study on Insurance Schemes of Government of India," *National Institute of Public Finance and Policy,* (2011): http://www.nipfp.org.in/media/medialibrary/2013/08/insurance_report_final.pdf.

schemes collect revenue through pay roll taxes, but are inaccessible to the majority of the Indian work force engaged in the informal economy.[7] With nearly 30% of the population living below the poverty line, the cost of PHI schemes limits the reach to less than five percent of the population.[8] CBHI schemes, which rely heavily on risk-sharing and community involvement, show great potential in promoting health equity by increasing insurance coverage among rural and low income populations.

The objective of this study is to examine how CBHI coverage affects health seeking behavior among disadvantaged groups through a case study of the Self-Employed Women's Association (SEWA). SEWA was founded in 1972 by Ela Bhatt in order to advocate for women working in the informal sector. The organization, which operates out of Ahmedabad City, works with women to provide financial services, capacity building, and healthcare. CBHI schemes were developed through the National Insurance VimoSEWA Cooperative in order to provide these women with social security. VimoSEWA currently operates in five states and has provided over 65,000 women and their families more than INR 130 million (USD 3 million) in claim payouts.[9]

This study analyzes health claims filed with VimoSEWA's family health insurance scheme, *Swastha Parivar,* in order to examine the extent to which equity is achieved across gender and geography. In the context of this study, equity is determined by comparing the distribution of hospitalization claims with the distribution of *Swastha Parivar* memberships to investigate whether health insurance coverage positively impacts health seeking behavior, and

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[7] Bhaskar Purohit, "Community Based Health Insurance in India: Prospects and Challenges," *Health* 6 (2014): 1237-1245, http://www.scirp.org/journal/health.

[8] ibid

[9] Mala Dayal, *Towards Securer Lives: SEWA's Social Security Program* (New Delhi: Ravi Dayal Publisher, Ahmedabad: MSAT, 2001), 115.

what barriers to access exist among disadvantaged groups when the burden of medical costs are reduced.

This study concludes that the number of male and female claims in the sample is consistent with the distribution of gender among *Swastha Parivar* members. The sample demonstrates minimal discrepancy in average estimated cost of medical treatment and average percent of cost approved for reimbursement between males and females. Among patients below eighteen years of age, the male hospitalization rate is substantially higher than the female rate, despite only a small majority percentage in memberships. The number of claims filed from urban versus rural areas is consistent with the geographical distribution of members. However, urban members outnumber rural members three to one, despite evidence suggesting that rural populations exhibit lower levels of health than urban populations.[10] Additionally, rural members on average seek more expensive treatment and receive a lower percentage of treatment cost as a payout.

[10] Rural Health Statistics, Government of India Ministry of Health and Family Welfare Statistics Division, 2014-15.

3. Review of Literature

3.1 Health Equity in India

The World Economic Forum ranked India 142 out of 144 countries in terms of gender equity in health.[11] Gender discrimination and inequality are present throughout all stages of a woman's life. Post neonatal mortality rates are higher for female children, early marriage and pregnancy pose health risks among adolescent girls, anemia affects more than half of pregnant women, and women over 60 tend to have greater disability and more co-morbidities than men of the same age. Afflictions such as dementia, depression, loss of vision, cancer, and arthritis have been shown to disproportionately affect women, and a study by INCLEN demonstrated that 40.3% of women sampled reported at least one instance of physical abuse in their lifetime.[12] Not only are women more susceptible to a variety of ailments, but they are more likely to resort to home remedies or medicines without prescription, less likely to consult qualified medical professionals, and more likely to miss a prescribed dose of medication than men.[13] Gender discrimination is present in preventative care as well, demonstrated by an increase in the gender immunization gap from 2.6% in 1993 to 3.8% in 2006.[14] Overall, women in India are more vulnerable to afflictions and seek treatment at a lower rate than their male counterparts.

In terms of geographical equity, rural populations in India tend to have a shorter life expectancy and exhibit lower levels of health across a range of indicators. Widespread disparity

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[11] Global Gender Gap Report, World Economic Forum, 2016.

[12] High Level Expert Group Report on Universal Health Coverage for India, Planning Commission of India, 2011.

[13] Manmeet Kaur, Suninder K. Sodhi, Parampreet Kaur, Jasmik Singh, Rajesh Kumar, "Gender Differences in Health Care Seeking Behavior of Tuberculosis Patients in Chandigarh," *Indian Journal of Tuberculosis,* no. 60 (2013): 217-222, http://medind.nic.in/ibr/t13/i4/ibrt13i4p217.pdf.

[14] Yarlini Balarajan, S Selvaraj, SV Subramanian, "Health care and equity in India," *Lancelot* 377.9764 (2011): 505-515, doi: 10.1016/S0140-6736(10)61894-6.

places the burden of chronic disease, non-communicable disease, and premature morbidity primarily on those who reside outside of metropolitan districts. Malnutrition, anemia, inadequate drinking water, and unsatisfactory sanitation are among the myriad of health determinants that disproportionally affect rural communities.[15] Additionally, the immunization rate among rural inhabitants is only 39% compared to 58% among urban populations. Rural populations are also adversely affected by the unavailability of treatment. Although rural citizens make up 72% of the population, they have access to only 34% of public and private hospital beds. The national hospitalization rate for rural populations is 2.2%, compared to a rate of 3.1% among urban populations.[16] There is a nationwide shortage of formally trained or licensed practitioners in rural areas, and practitioner absenteeism is common. A study in the state of Rajasthan demonstrated that 40 percent of rural private providers did not hold a medical degree and almost 20 percent had not finished secondary school.[17] Rural communities are more likely to be affected by a variety of conditions, and less likely to receive treatment due to unavailability and inadequate levels of care.

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[15] NRHM Framework for Implementation, Government of India National Health Mission, 2005.

[16] Soumitra Ghosh, "Equity in the utilization of healthcare services in India: evidence from National Sample Survey," *International Journal of Health Policy and Management* 2.1 (2014): 29-38, doi: 10.15171/ijhpm.2014.06.

[17] Yarlini Balarajan, S Selvaraj, SV Subramanian, "Health care and equity in India," *Lancelot* 377.9764 (2011): 505-515, doi: 10.1016/S0140-6736(10)61894-6.

3.2 History of VimoSEWA

Through their work with self-employed women, SEWA realized that there was a need for women to save money in case of unforeseen calamities. Saving posed a logistical challenge because keeping money in the house comes with the risk of theft, sometimes even by the woman's friends or family. SEWA began to address the issue of saving by linking women with national banks, but it became clear that bank employees were inexperienced in dealing with illiterate women, many of whom were attempting to deposit very small sums of money. Thus, in 1974 SEWA Bank was born. The fund began with a deposit of 10 rupees from 4,000 different women. Savings were collected each week from the women's home or workplace.[18]

In the late 1970s, SEWA approached insurance companies about constructing a group scheme for a small annual premium that would cover self-employed women. National legislation at the time required insurance to be regulated by the government. Most government sponsored companies were reluctant because these women were seen as high risk. The fear was that the women wouldn't be able to pay the premiums and, because of socioeconomic status, they were more prone to accident and illness. Companies believed they would spend more on reimbursements than they would earn on premiums. In 1978, the Life Insurance Corporation (LIC) agreed to partner with SEWA to provide life insurance, only for natural death, for an annual premium of six rupees. This did not satisfy the women, who demanded insurance for other calamities as well. In 1992, the United India Insurance Company (UIIC) linked up with SEWA to upgrade to an integrated insurance scheme that would cover hospitalization, accidental

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[18] Mala Dayal, *Towards Securer Lives: SEWA's Social Security Program* (New Delhi: Ravi Dayal Publisher, Ahmedabad: MSAT, 2001), 115.

death of a woman or her husband, and damage to assets such as house or work tools. The premium was 45 rupees, and seven thousand women signed up in the first year.

Soon after, SEWA began the fixed deposit program, in which women would keep a certain amount of money in their bank account so that annual interest accrued would cover the cost of the premium. This incentivized both insurance and savings. The fixed deposit program was also the first program to cover maternity benefits, at an additional cost, which included prenatal care, antenatal care, emergencies, and hospital stays. The maternity benefits were a huge selling point, and the number of women enrolled in the fixed deposit program grew from 31% in 1996 to 60% in 2000.[19]

The UIIC insurance scheme provided families with economic relief during times of struggle. The scheme taught women how to preserve and photocopy various documents which were necessary in order to make claims. However, there were difficulties in implementation. While the disbursement of money for death or illness was relatively timely, usually within a month, it could take up to one year for reimbursements to be received in the case of flood, fire, or riot. SEWA members had to verify the claim and in many cases could not reach the affected area for some time. The UIIC also required their own verification, which was often delayed. UIIC members assigned low value to assets and often denied claims. By 1994, the UIIC was making more money from the premiums than it was giving out in reimbursements. The high rate of claim rejection caused women to lose faith in SEWA.[20]

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[19] Mala Dayal, *Towards Securer Lives: SEWA's Social Security Program* (New Delhi: Ravi Dayal Publisher, Ahmedabad: MSAT, 2001), 115.

[20] ibid

As a result, SEWA broke off ties with the UIIC in 1994. Although still linked to LIC, SEWA was forced to increase their premium. The package would now include gynecological services, diseases specific to women, work-related illnesses, and reimbursement to women in case of husband separation. The high rate of claims made for hysterectomies and other gynecological services in the coming years was an indicator that this alteration was an improvement. In 2000, the insurance department separated from SEWA Bank and became its own branch of the organization, with the title VimoSEWA.

Insurance in India was a public sector institution until the year 2000, when the Malhotra Commission deregulated the market and set up the Insurance Regulatory and Development Authority (IRDA). The government hired Ela Bhatt, founder of SEWA, as an advisor to the IRDA. Absorption of insurance into the private sector allowed VimoSEWA to further develop its insurance activities to include increased health coverage for the rest of the family. VimoSEWA preferred to operate as a cooperative owned and run by its members, but at that time cooperatives were not permitted by the government to implement insurance schemes. In 2002, the IRDA agreed to allow cooperatives to run their own schemes, as long as they met the capital requirement of one billion rupees. VimoSEWA has attempted to persuade the Ministry of Finance to lower this requirement for cooperatives targeted towards poor populations, as their schemes are run on a smaller scale than commercial insurance companies.

In 2001, the Gujarat Earthquake caused over 13,000 deaths, 167,000 injuries, and the destruction of more than 400,000 homes. The result was over 3,000 asset loss claims filed with VimoSEWA over the course of a few months. VimoSEWA membership increased three fold in this time span, demonstrating a need for capacity building and organizational strength. The

cooperative began training teams of aagewans and Vimo-sathis, women who were in charge of selling coverage door-to-door within their own communities. In 2004, packages were extended to cover the children of members.[21]

VimoSEWA memberships continued to increase steadily until 2008, when a number of factors adversely affected interest in the program. Partnerships with outside non-governmental organizations (NGOs) and microfinance institutions (MFIs) began to unravel, partially because organizations felt they had learned enough about micro-insurance to develop independently, and partially because initial interest in micro-insurance began to fade. Additionally, the number of claims that required payouts, as well as the increased administrative and service costs that came with the growth of the program, lead to a deficit that forced VimoSEWA to increase their premiums.[22]

In 2009, VimoSEWA became the first women-owned multi-state cooperative in the country and was acknowledged by the MacArthur Foundation for effective and creative initiatives. SEWA partnered with an organization called FIDES in 2009 to assist with the implementation of a similar micro-insurance scheme in Namibia. Between 2009 and 2012, VimoSEWA implemented a function-based organizational structure, a formal performance measurement system, revised objectives, different product and marketing strategies, and a new operations framework in an effort to work towards financial viability, while simultaneously attempting to hold onto social aims.[23]

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[21] Mala Dayal, *Towards Securer Lives: SEWA's Social Security Program* (New Delhi: Ravi Dayal Publisher, Ahmedabad: MSAT, 2001), 115.

[22] Arman Oza, Aparna Dalal, Jeanna Holtz, "VimoSEWA's Resurgence: Increasing Outreach and Managing Costs in a Voluntary Stand-Alone Microinsurance Programme," *ILO Cataloguing in Publication Data,* no. 25 (2013): 50, http://www.sewainsurance.org/Case-Study-VimoSEWA.pdf.

[23] ibid

Although VimoSEWA offers five separate insurance packages, this study focuses on only one scheme: *Swastha Parivar*. Details for the scheme are given below.

Annual Premium	Natural Death Benefit	Hospitalization Benefit (per day)
INR 400	INR 10,000	INR 100
INR 1,000	INR 25,000	INR 250

The *Swastha Parivar* annual premium covers one primary member, their spouse, and up to four children. Only women between the ages of 18 and 55 may enroll in the scheme. Once enrolled, the policy covers members until 70 years of age. A minimum of 24 hours hospitalization is required in order to file a claim, although this requirement is not applicable in the case of cataracts, laparoscopy, and fractures. In rural areas, treatment by traditional bone-setters is permitted for fractures. Pre-existing conditions are covered only after the first year of enrollment, and hospitalization due to HIV/AIDS, substance abuse, and/or psychological disorders is not covered.[24]

[24] Arman Oza, Aparna Dalal, Jeanna Holtz, "VimoSEWA's Resurgence: Increasing Outreach and Managing Costs in a Voluntary Stand-Alone Microinsurance Programme," *ILO Cataloguing in Publication Data,* no. 25 (2013): 50, http://www.sewainsurance.org/Case-Study-VimoSEWA.pdf.

4. Methodology

This study took place in Ahmedabad, the largest city in the state of Gujarat and seventh largest metropolitan area in India.[25] Ahmedabad City is a hub for economic and industrial development, and was named by Forbes as one of the fastest growing cities of the decade in 2010. However, nearly 7% of the city's population lives below the poverty line.[26] Gujarat exhibits higher indicators of health than India as a whole, including a lower infant mortality rate, lower maternal mortality rate, and higher literacy rate across all genders.[27] Rural inhabitants make up 56.4% of the state's population, and display lower indicators of health than urban inhabitants.[28]

This study used quantitative data to analyze trends in claims made through the VimoSEWA and qualitative empirical evidence to attempt to explain these trends. Quantitative data was obtained through a sample of 459 *Swastha Parivar* claims filed between October 2016 and March 2017. All quantitative data was provided by VimoSEWA. Claims were first examined to determine overall trends, including patient age, estimated cost of medical treatment, amount approved by VimoSEWA, and disease category prevalence. Claims were then categorized by patient gender, noting trends in average estimated cost and average percentage of cost approved, as well as disease category prevalence. Taking gender into account, claims were categorized into six age brackets: below 18 years, 18-29 years, 30-39 years, 40-49 years, 50-59 years, and 60

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[25] Smart City Profile: Ahmedabad, Gujarat, Government of India Ministry of Urban Development.

[26] Unit Level Data of National Sample Survey Organization, Household Consumer Expenditure in India, 68th Round, 2011-12.

[27] Health Indicators, National Health Mission, State Health Society, Health and Family Welfare Department, Government of Gujarat.

[28] Rural Health Statistics, Government of India Ministry of Health and Family Welfare Statistics Division, 2014-15

years and above, noting average estimated cost and average percentage of cost approved, as well as age distribution across disease category. Finally, claims were categorized by geography to examine the percentage of claims filed in urban versus rural areas and the distribution of claims by district. Within the context of this study, urban is defined as within the limits of Ahmedabad City and rural is defined as small villages outside the boundaries of Ahmedabad's metropolitan area. All claims in this sample were filed either from Ahmedabad City or from villages in rural Gujarati districts. The percent of female claims versus male claims in urban and rural areas was noted, as well as average patient age by geography. Average estimated cost of treatment and average percent of cost approved were recorded, both across urban versus rural areas and by district. The number of urban versus rural claims in each disease category was also recorded. Claims data was then compared to the distribution in VimoSEWA *Swastha Parivar* memberships. A list of all persons covered under the insurance scheme as of March 2017 was analyzed to determine the percent of members who were male, female, urban, and rural, as well as the distribution of age across memberships.

This quantitative analysis was supplemented by interviews, observations, and reviews of secondary sources. Three VimoSEWA primary members who had filed health claims between November 2016 and March 2017 were interviewed about their experience with VimoSEWA. Interviews were structured with open ended questions (see *Appendix A* for interview questions). Each interview lasted between 20 and 60 minutes. Two field visits were also conducted, one in the city district of Chamunpura and one in the rural village of Charal, in order to meet members and hear about their experience with VimoSEWA. All interviews and field visits were performed in Hindi and Gujarati with help from a translator provided by SEWA. These interviews and

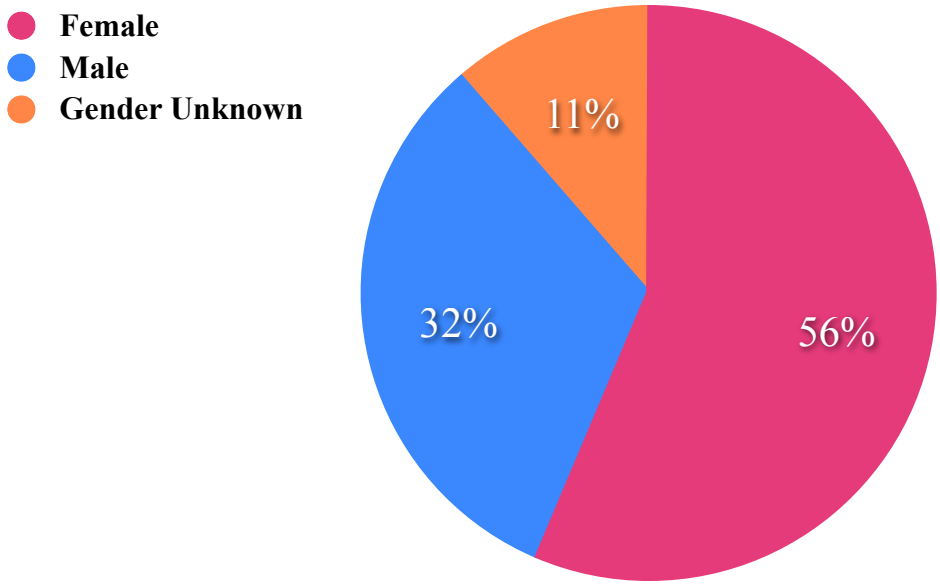
observations, along with secondary sources on national tendencies in health seeking behavior, provide supporting evidence in the explanation of trends detected in the sample.

5. Results

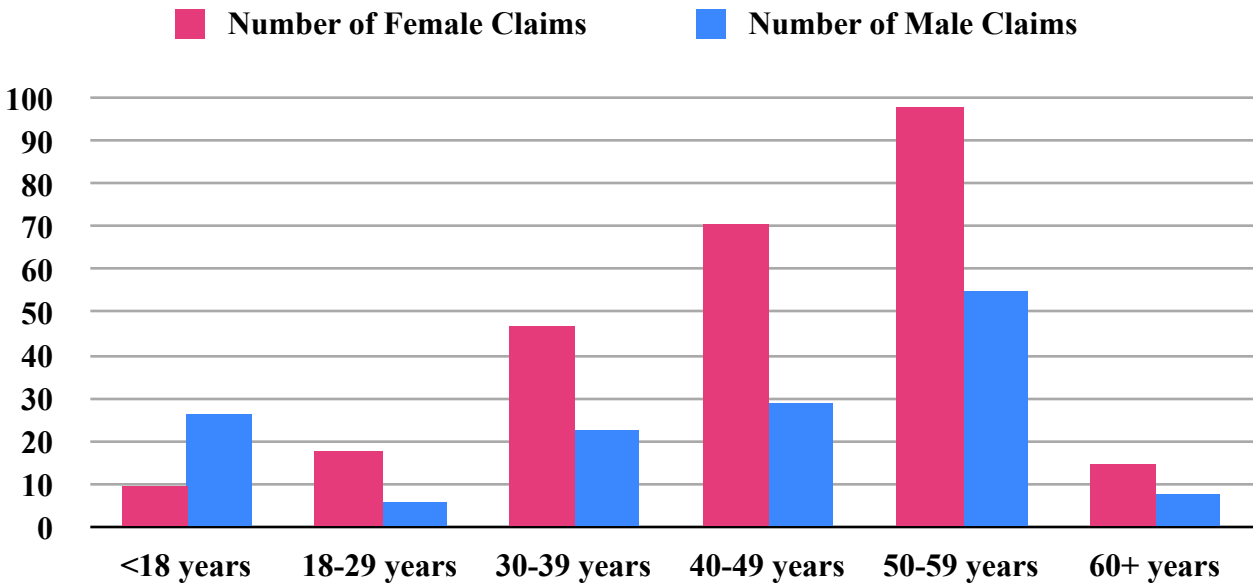
5.1 Analysis of Swastha Parivar Claims

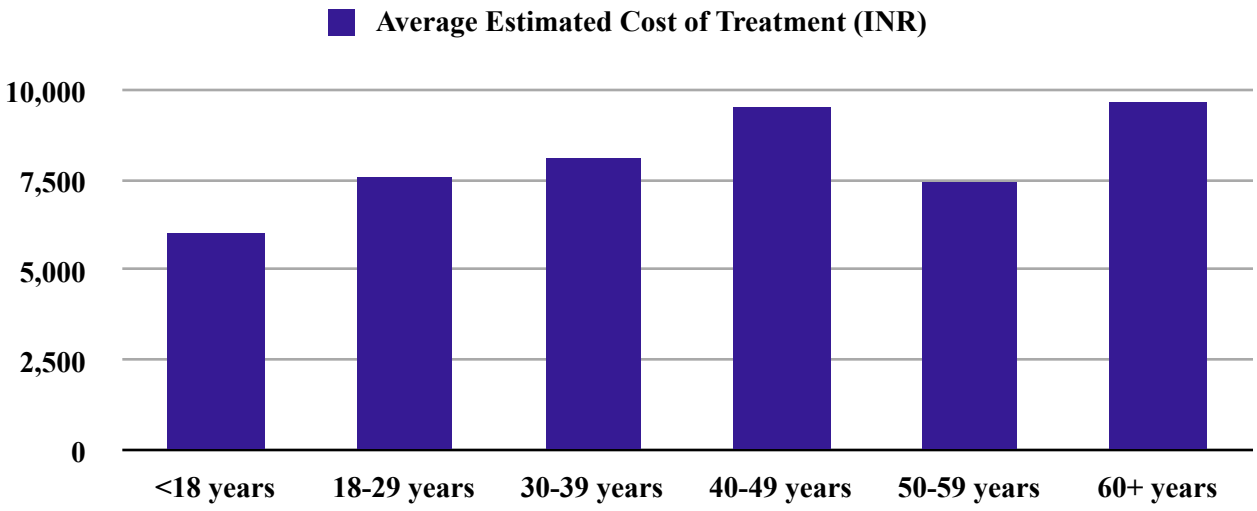
This sample contained 459 claims for patients between the ages of one and sixty-seven, with an average patient age of 42.1 years. The average estimated cost of treatment was INR 8,044 while the average amount approved was INR 3,182. On average, 60.5% of the cost of treatment was approved. The most prevalent disease categories were fever with 89 claims, eye problems with 78 claims, and gastrointestinal problems with 30 claims. The full quantitative data report can be found in *Appendix B*.

Out of 459 claims filed, 259 were filed for female patients, 148 were filed for male patients, and 52 were filed without a specified gender. The average estimated cost of treatment for females was INR 8,254, with an average of 57.2% of cost approved. The average estimated cost of treatment for males was INR 8,487 with an average of 62.2% of cost approved. The most prevalent disease categories for females were eye problems (55 claims), fever (40 claims), and blood pressure (27 claims). The most prevalent disease categories for males were fever (32 claims), eye problems (15 claims), and cardiovascular problems (14 claims). The disease categories in which claims were filed exclusively for females were abdominal pain, gall bladder problems, gynecological, muscle problems, psychotic illness, skin problems, spinal problems, swelling, and thyroid problems. The disease categories in which claims were filed exclusively for males were alcohol related illness, convulsion, infection, pancreatic problems, rectal problems, throat problems, urinary/bladder problems, and vertigo.



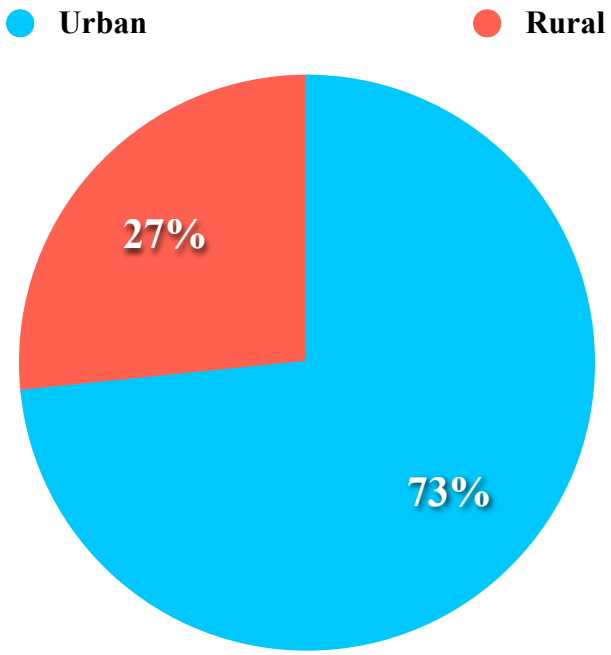
The age distribution of claims is relatively linear, with members seeking more hospitalization as they get older. The two exceptions to this trend are disproportionately low claims among members between 18 and 29 years and members over 60 years. When adjusted for gender, female claims outnumber male claims in every age bracket except for below 18 years. The average estimated cost per age group is also relatively linear, with the exception of a disproportionately low average cost for patients between 50 and 59 years. The average percent of cost approved was 67.5% for patients below 18 years, 55% for patients between 18 and 29 years, 52.8% for patients between 30 and 39 years, 58.8% for patients between 40 and 49 years, 63.4% for patients between 50 and 59 years, and 61.2% for patients 60 years and above. Fever, gastroenteritis, and kidney problems are the disease categories in which claims were filed for every age bracket.





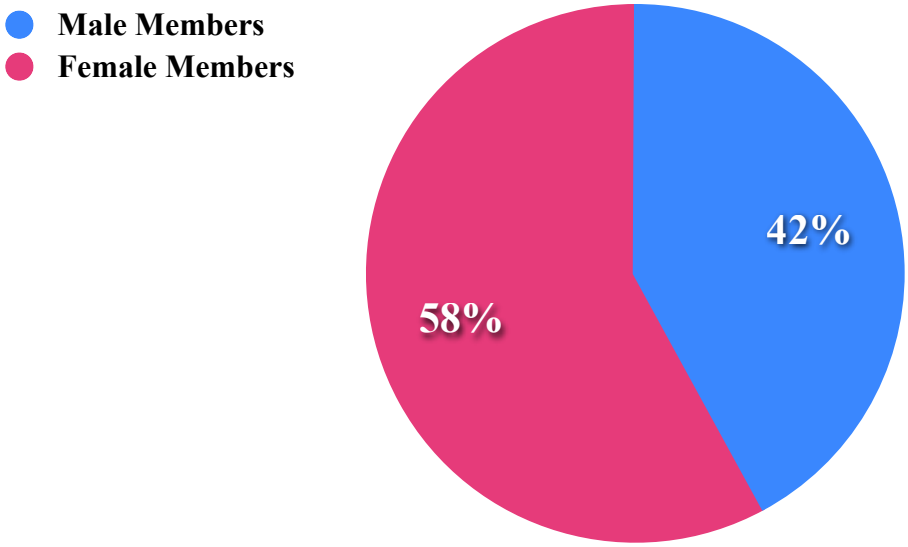
This sample included 337 claims from urban areas and 122 claims from rural areas. The average estimated cost of treatment in urban areas was INR 7,580, while the average estimated cost for rural areas was INR 9,328. Urban areas demonstrated an average of 67.1% of cost approved, while rural areas demonstrated an average of 42.2% of cost approved. The number of male claims was 109 in urban areas and 32 in rural areas. The number of female claims was 184

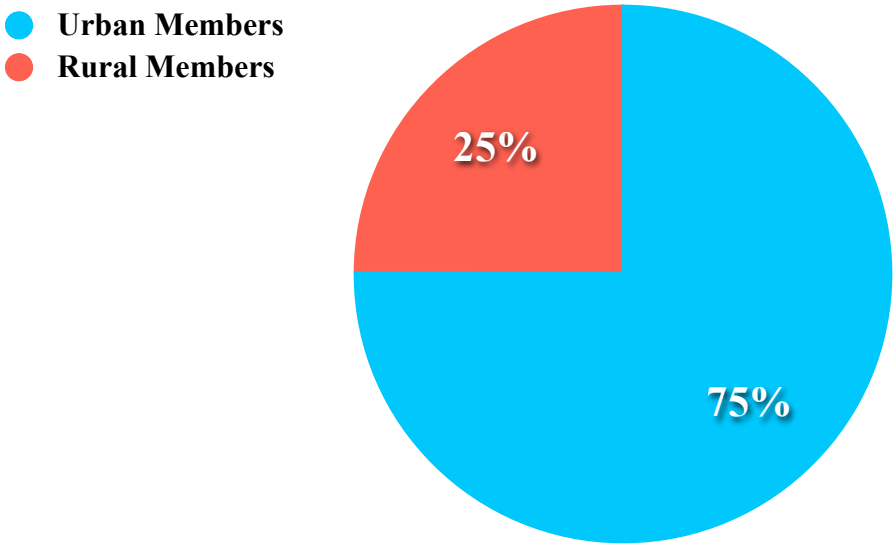
in urban areas and 75 in rural areas. The most prevalent disease categories among urban claims were fever (70 claims), eye problems (59 claims), and blood pressure (30 claims). The most prevalent disease categories among rural areas were eye problems and fever (both with 19 claims), and fracture/injury (10 claims). The disease categories in which claims were filed exclusively in urban areas were ear problems, infection, muscle problems, pain, pancreatic problems, psychotic illness, and spinal problems. The disease categories in which claims were filed exclusively in rural areas were alcohol related illness, anemia, skin problems, swelling, and throat problems.



5.2 Analysis of Swastha Parivar Membership

As of March 2017, there were 1,032 households enrolled in the *Swastha Parivar* scheme, with coverage extending to 1,684 members. In total, male members made up 42% of total coverage and female members made up 58% of total coverage. Urban households, located within Ahmedabad City, made up 75% and rural households, located in villages throughout Gujarat, made up 25% of all memberships.





6. Discussion

6.1 Gender Equity

Between October 2016 and March 2017, 56% of the claims in VimoSEWA's *Swastha Parivar* health insurance scheme were filed for female patients. Women make up 57.9% of all *Swastha Parivar* members. The average estimated cost of treatment for females was 233 rupees less than the average estimated cost of treatment for males and the average percent of cost approved for female patients was five percentage points lower than the average percent of cost approved for male patients.

The data in this sample suggests that among VimoSEWA *Swastha Parivar* members, women are seeking hospitalization at relatively the same rate as men. This is not reflective of the national trend, in which women seek treatment less frequently than men.[29] An explanation for this increase in health seeking behavior is that VimoSEWA's structure, in which women are the primary members in charge of their household's coverage, has empowered women to take charge of their own health. Studies throughout developing countries have shown that an increase in women's decision-making autonomy results not only in their appropriate utilization of healthcare facilities, but in long term lowered fertility rates and higher child survival rates.[30] VimoSEWA's structure also incentivizes women to seek hospitalization rather than resorting to home remedies

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[29] Manmeet Kaur, Suninder K. Sodhi, Parampreet Kaur, Jasmik Singh, Rajesh Kumar "Gender Differences in Health Care Seeking Behavior of Tuberculosis Patients in Chandigarh," *Indian Journal of Tuberculosis,* no. 60 (2013): 217-222, http://medind.nic.in/ibr/t13/i4/ibrt13i4p217.pdf.

[30] Pauline E Osamor, Christine Grady "Women's Autonomy in Health Care Decision-Making in Developing Countries: A Synthesis of the Literature," *International Journal of Women's Health*, 8 (2016): 191-202, doi: 10.2147/IJWH.S105483.

or unprescribed medicines, seeing as *Swastha Parivar* claims cannot be filed without proof of hospitalization.[31]

The interviews and field visits conducted by the researcher support the presence of autonomy and empowerment among women. The female subjects interviewed carried themselves with confidence, spoke knowledgeably about the scheme and their household's financial matters, and advocated for their rights. During field visit to Chamunpura, a low income neighborhood of Ahmedabad City, approximately twenty VimoSEWA members met with the community's Vimo sathi and a representative of the VimoSEWA claims team. The Chamunpura Vimo sathi, who had formed close relationships with each member, introduced each woman and her family to the researcher and VimoSEWA representative. The women came with copies of their membership documents and their most recent claims receipts, and took turns presenting their paperwork to the VimoSEWA representative and asking case-specific questions about the reimbursement process. In general, the women enrolled in the VimoSEWA scheme appeared to exhibit high levels of financial organization and assertiveness.

The claims in this sample also show that the average estimated cost for male and female claims only shows a INR 233 difference. This indicates that males and females are seeking hospitalization for ailments of relatively similar severities. The average percent of cost approved demonstrates only a five percent difference, suggesting that male and female claims receive similar payouts, and not providing evidence of any systematic discrimination.

When the claims are adjusted for gender and age, female claims outnumber male claims in every age bracket except for those below 18 years of age. Among claims filed for members

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[31] Mala Dayal, *Towards Securer Lives: SEWA's Social Security Program* (New Delhi: Ravi Dayal Publisher, Ahmedabad: MSAT, 2001), 115.

under 18 years, 73% are for males, even though males make up only 57% of memberships in this age bracket. This may be due to gender preference discrimination in the household. Culturally, Indian households tend to favor male children in terms of healthcare and nutrition. Studies have demonstrated that the majority of mothers sampled prefer sons to daughters and that this bias increases the likeliness of malnutrition among female children.[32] When the claims are adjusted for gender and geography, the overall trend remains the same: females are filing relatively similar numbers of claims as males when adjusted for membership distribution.

Women make up the majority of VimoSEWA *Swastha Parivar* memberships and file the majority of *Swastha Parivar* claims. The average estimated cost of treatment is relatively equal for both males and females, indicating that both genders are seeking treatments of similar severity. The average percent of cost approved is also similar, indicating that there is little evidence to suggest that systematic discrimination is present in this sample. Although there is evidence of slight gender preference discrimination among members below 18 years of age, this study concludes that gender equity is achieved in the sample.

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[32] Vijayan K. Pillai, Jeyle Ortiz-Rodriguez, "Child Malnutrition and Gender Preference in India: The Role of Culture," *Health Science Journal,* (2015)*:* http://www.hsj.gr/medicine/child-malnutrition-and-gender-preference-in-india-the-role-of-culture.php?aid=7426#corr.

6.2 Geographical equity

Within this sample, 27% of claims are filed from rural areas while 73% of claims are filed from urban areas. *Swastha Parivar* membership demonstrates that 25% of members are from rural areas while 75% are from urban areas"three to one". The average estimated cost of treatment is INR 9,328 for rural patients, INR 1,748 higher than the average cost for urban patients. On average only 42.2% of the cost is approved, 24.9 percentage points lower than the average rate of approval for urban members, and 18.3 percentage points lower than the overall average. The data in this sample indicates that rural and urban members are seeking hospitalization at relatively similar rates, a trend that is not observed nationally. This may be due to VimoSEWA's allowance of certain traditional forms of healthcare, such as bone settling, to be covered under the scheme, which increases treatment availability while decreasing the burden of cost.

The inequality in distribution of memberships is vast, with urban memberships outnumbering rural memberships three to one, despite the fact that rural populations nationwide have demonstrated lower levels of health. This disparity may be due to a weak relationship between VimoSEWA and rural populations. Mirai Chatterjee, chairwoman of VimoSEWA, writes in her article "Microinsurance for the Poor: Some Reflections" [33] that building a strong relationship with the community the scheme serves is essential because members must be convinced that the benefits of the scheme are worth the cost of the premium. Not only will trust in the institution produce satisfied members, it contributes towards universalization, a concept that allows for a greater chance of viability in CBHI schemes. Members who believe in the

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[33] Mirai Chatterjee, "Microinsurance for the Poor: Some Reflections," (Ahmedabad: SEWA, 2004).

scheme will encourage their friends and family to join. In an conversation with the researcher, VimoSEWA member Jethiben stated that her primary reason for enrollment in *Swastha Parivar* was her husband's relation to a Vimo sathi in their community.[34] It is also possible that the inequality in memberships may be reflective of the unavailability and poor quality of treatment in rural areas. There is no incentive for rural inhabitants to pay a premium that will cover the cost of treatment if treatment is inaccessible regardless.

There is a notable disparity in average estimated cost of treatment and percent of cost approved among rural and urban claims. The top two disease categories in which claims were filed are the same for both rural and urban members: fever and eye problems. This suggests that rural members are seeking treatment for the same ailments but at a higher severity. Claims from rural areas in this sample were approved at a significantly lower rate than claims from urban areas. In the past, VimoSEWA claims have been denied from primarily in rural areas due to a lack of paperwork retention, either due to women's illiteracy or property damage, and the rejection of doctors and hospital that were not up to standard.[35]

Among VimoSEWA members, rural and urban hospitalization rates demonstrate geographical equity. However, the comparatively low number of rural memberships, along with the higher cost of treatment and lower approval rate, indicates that rural members still face a higher financial burden of medical treatment than urban populations, despite lower health indicators.

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[34] Jethiben (VimoSEWA member) in discussion with the author, May, 2017.

[35] Mala Dayal, *Towards Securer Lives: SEWA's Social Security Program* (New Delhi: Ravi Dayal Publisher, Ahmedabad: MSAT, 2001), 123.

7. Conclusion

7.1 Summary of Results

The objective of this study was to determine the extent to which health equity exists when the barrier of finance is reduced. Six months-worth of VimoSEWA *Swastha Parivar* health claims were analyzed in order to determine the distribution across gender and geography. This distribution was then compared to the distribution of memberships in order to examine the rates at which hospitalization was sought by male, female, urban, and rural members, and to attempt to identify systematic inequalities.

This study finds that the number of claims filed for each gender reflects the gender distribution of *Swastha Parivar* memberships. The discrepancy between female claims and female membership was only 1.9 percentage points. The discrepancy among male claims and male membership was 10.2 percentage points. Claims filed without a gender made up 11% of all *Swastha Parivar* claims. This study also found a relatively equal estimated cost of treatment among male and female patients, with a difference of INR 233, and a relatively equal percent of cost approval rates, with a difference of only five percentage points. Within this sample, it appears that female members are seeking hospitalization at similar rates for conditions of similar severity and being awarded similar pay outs to male members. When claims are adjusted for gender and age, this sample displays an unequal rate of hospitalization between male and female children, a trend that is likely due to household gender preference discrimination.

All of these factors lead this study to conclude that while gender equity is achieved among adults within the VimoSEWA *Swastha Parivar* insurance scheme, gender inequity is present among members under the age of 18.

In terms of geographical equity, the number of claims filed from urban versus rural areas is consistent with the distribution of urban and rural members, with a discrepancy of only two percentage points. However, urban members outnumber rural members three to one. Rural members seek treatment that is an average of INR 1748 higher than urban members and receive only 42.2% of treatment cost as a payout. This study concludes that while equity is achieved in the distribution of urban versus rural claims, geographical equity is not demonstrated in the distribution of memberships, nor in the average rural percent of cost approved.

Financing medical treatment is an enormous challenge in the struggle for UHC. VimoSEWA demonstrates that CBHI can positively impact health seeking behavior among nationally disadvantaged groups. This study supports the notion that when the cost of treatment is reduced, people are more likely to seek hospitalization. However, there are limits: the culture of gender preference discrimination must be overcome, the lack of education and community participation among disadvantaged groups must be addressed, and the availability of medical institutions must be increased in rural areas.

7.2 Limitations

This study was limited by the size of the sample, which included only six months worth of claims, and the presence of incomplete information in claims data, specifically in patient gender. This study was unable to interview a representative sample of VimoSEWA members who had filed claims in this sample due to time and resource constraints. Interviews and field study observations were also limited by language barriers: members spoke primarily in Hindi and Gujarati, and were translated into English. This study did not examine reasons for the inequity in distribution of memberships across gender and geography, only the discrepancy between claims and memberships.

7.3 Recommendations for further study

Further studies would confirm the conclusions of this data by using a larger sample, as well as examining distribution across gender and geography in other VimoSEWA schemes. The researcher recommends for the findings in this study to be compared to other insurance schemes throughout India, both public and private.

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10. Appendices

Appendix A: Case Study Interview Questions

Name?

Age?

Household size?

Job?

Income?

Where are you from?

When did you get married?

When did you sign up for VimoSEWA?

Why did you sign up for VimoSEWA?

What do you like about VimoSEWA?

What would you change about VimoSEWA?

Did you or members of your household have any preexisting conditions when you joined VimoSEWA?

How often do you/members of your household fall ill?

What are the barriers to you/members of your household seeking treatment?

Appendix B: Quantitative Data

	Swastha Parivar
Number of Claims	459
Average Age	42.1
Minimum Age	1
Maximum Age	67

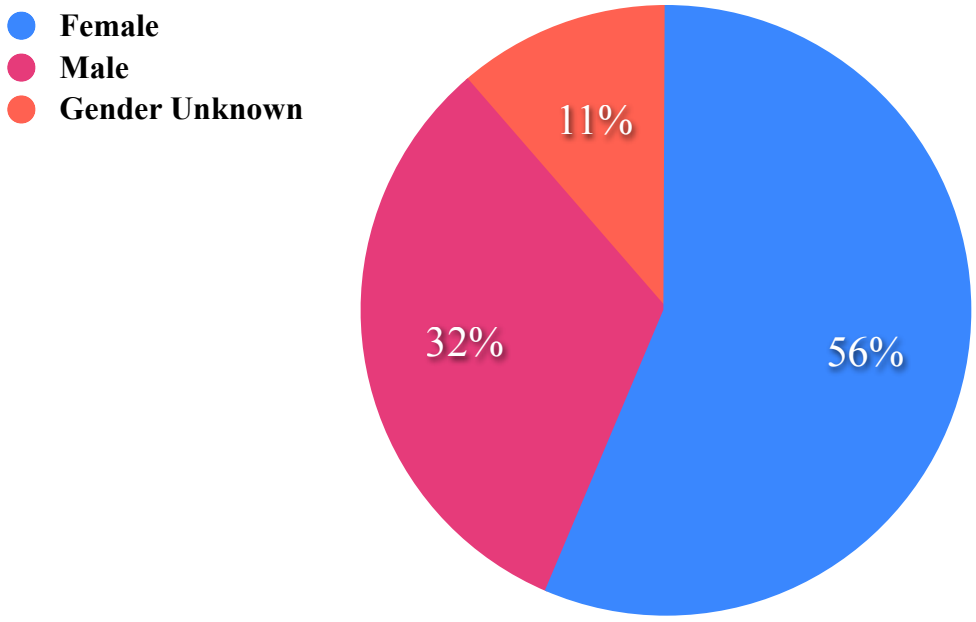
Average Estimated Cost: INR 8044
Average Amount Approved: INR 3182
Average Percent of Cost Approved: 60.5%

Disease Category	**Number of Claims**
Abcess	7
Abdominal Pain	5
Alcohol Related Illness	1
Anemia	2
Appendicitis	2
Blood Pressure	35
Cancer	6
Cardiovascular Problem	22
Convulsion	2
Diabetes	15
Ear Problem	1
Eye Problem	78
Fever	89
Fracture/Bone/Injury	25
Gall Bladder Problem	4
Gastroenteritis	30
Gynecological	18

Disease Category	Number of Claims
Hernia	2
Infection	2
Kidney Problem	8
Liver Problem	10
Lung Disease	6
Malaria	12
Muscle Problem	1
Pain	3
Pancreatic Problem	2
Psychotic Illness	1
Rectal Problem	2
Respiratory Infection	28
Skin Problem	1
Spinal Problem	1
Stone	3
Surgical Procedure	4
Swelling	2
Throat Problem	1
Thyroid Problem	3
Tuberculosis	8
Urinary/Bladder Problem	7
Vertigo	2
Water Borne Disease	8

Gender Distribution of Patients

	Number of Swastha Parivar Claims
Male	148
Female	259
Unknown Gender	52



	Average Estimated Cost (INR)	Average Percentage of Cost Approved
Male	8487	62.20%
Female	8254	57.20%

Disease Category	Male Claims	Female Claims
Abcess	4	1
Abdominal Pain		5
Alcohol Related Illness	1	
Anemia	1	1

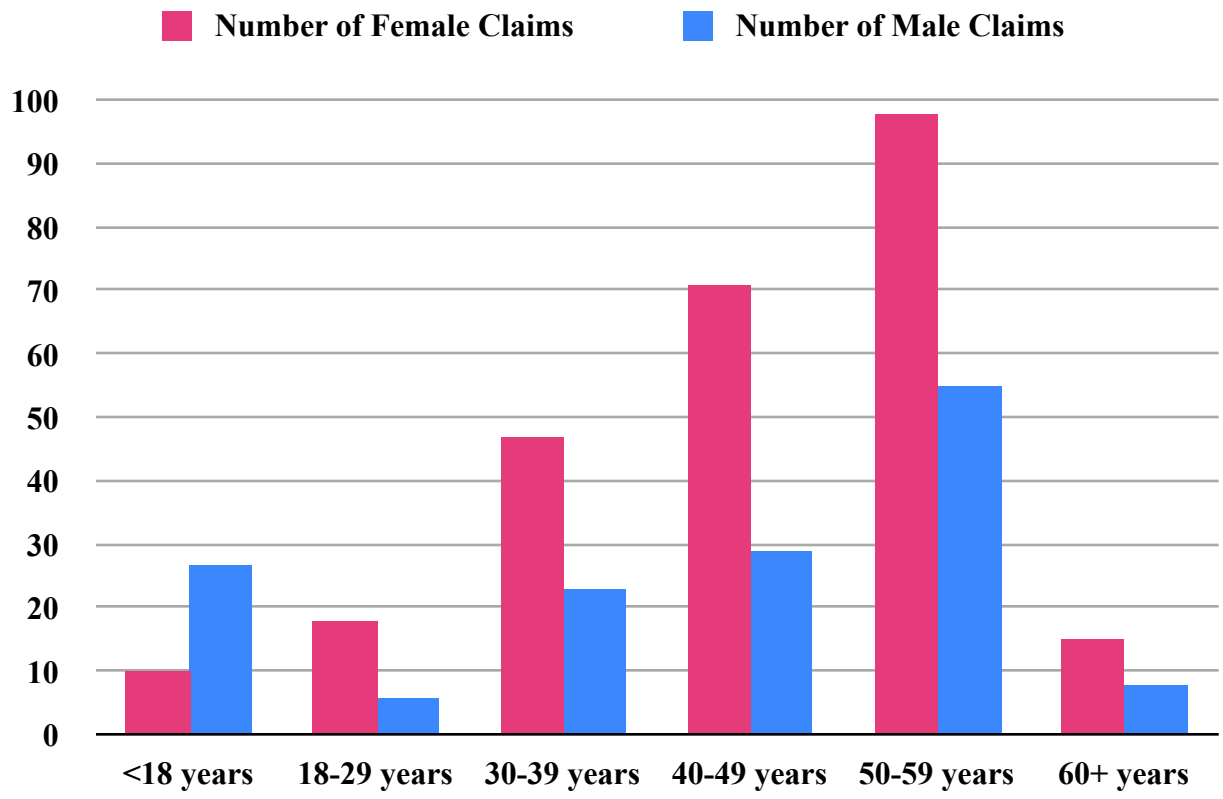
Disease Category	Male Claims	Female Claims
Appendicitis	1	1
Blood Pressure	5	27
Cancer	3	3
Cardiovascular Problem	14	7
Convulsion	2	
Diabetes	7	6
Eye Problem	15	55
Fever	32	40
Fracture/Bone/Injury	12	1
Gall Bladder Problem		4
Gastroenteritis	2	23
Gynecological		18
Hernia	1	1
Infection	1	
Kidney Problem	6	2
Liver Problem	4	6
Lung Disease	3	2
Malaria	4	7
Muscle Problem		1
Pain	1	1
Pancreatic Problem	2	
Psychotic Illness		1
Rectal Problem	2	
Respiratory Infection	11	15
Skin Problem		1
Spinal Problem		1
Stone	1	2

Disease Category	Male Claims	Female Claims
Surgical Procedure	1	2
Swelling		2
Throat Problem	1	
Thyroid Problem		3
Tuberculosis	5	2
Urinary/Bladder Problem	2	
Vertigo	2	
Water Borne Disease	1	5

Age Distribution of Patients

	Number of Swastha Parivar Claims
<18 years	56
18 - 29 years	27
30 - 39 years	74
40 - 49 years	112
50 - 59 years	165
60+ years	25

	Number of Swastha Parivar Claims	
	Male	**Female**
<18 years	27	10
18 - 29 years	6	18
30 - 39 years	23	47
40 - 49 years	29	71
50 - 59 years	55	98
60+ years	8	15



	Average Estimated Cost (INR)	Average Percent of Cost Approved
<18 years	6048	67.50%
18 - 29 years	7653	55%
30 - 39 years	8114	52.80%
40 - 49 years	9529	58.80%
50 - 59 years	7490	63.40%
60+ years	9739	61.20%

Disease Category	<18 years	18 - 29 years	30 - 39 years	40 - 49 years	50 - 59 years	60+ years
Abcess		1	2	1	3	
Abdominal Pain			1	3	1	
Alcohol Related Illness		1				

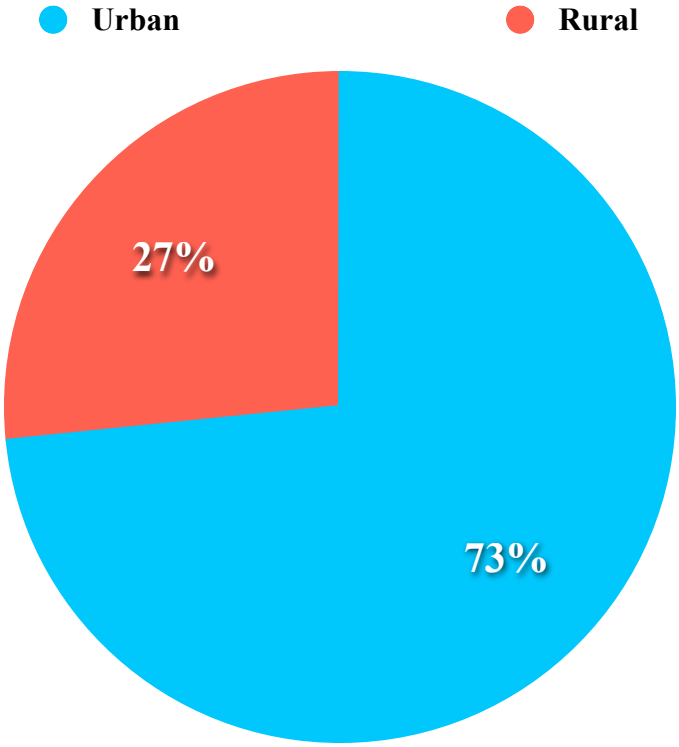
Disease Category	<18 years	18 - 29 years	30 - 39 years	40 - 49 years	50 - 59 years	60+ years
Anemia		1	1			
Appendicitis		1	1			
Blood Pressure			5	8	20	2
Cancer				3	1	2
Cardiovascular Problem				6	13	2
Convulsion	2					
Diabetes	1		2	7	5	
Ear Problem				1		
Eye Problem			5	13	52	8
Fever	27	10	15	16	18	3
Fracture/Bone/ Injury	3	1	4	10	7	
Gall Bladder Problem		1	1	1	1	
Gastroenteritis	3	2	4	9	10	2
Gynecological		1	8	7	2	
Hernia			1		1	
Infection	1				1	
Kidney Problem	1	1	3	1	1	1
Liver Problem	2		2	3	3	
Lung Disease				3	3	
Malaria	1	1	4	1	5	
Muscle Problem				1		
Pain				1	1	1
Pancreatic Problem			1	1		
Psychotic Illness			1			
Rectal Problem					1	1

Disease Category	<18 years	18 - 29 years	30 - 39 years	40 - 49 years	50 - 59 years	60+ years
Respiratory Infection	8	4		7	7	2
Skin Problem				1		
Spinal Problem					1	
Stone	1		2			
Surgical Procedure	1		2		1	
Swelling			1		1	
Throat Problem	1					
Thyroid Problem				2	1	
Tuberculosis	2	1	1		3	1
Urinary/Bladder Problem	1		2	3		
Vertigo					2	
Water Borne Disease	1	1	3	3		

Geography Distribution of Claims

	Number of Swastha Parivar Claims
Urban	337
Rural*	122

**Outside of Ahmedabad City*



	Female Claims	Male Claims	Average Patient Age
Urban	184	109	42
Rural*	75	39	42.5

**Outside of Ahmedabad City*

District	Number of Swastha Parivar Claims
Ahmedabad City	337
Ahmedabad District	49
Anand	25
Baroda	1
Gandhinagar	3
Kerala	3
Kheda	12

District	Number of Swastha Parivar Claims
Kutch	10
Mehsana	5
Sabarkantha	3

	Urban Claims	Rural* Claims
<18 years	47	9
18 - 29 years	19	8
30 - 39 years	45	29
40 - 49 years	82	30
50 - 59 years	120	45
60+ years	24	1

**Outside of Ahmedabad City*

	Urban Claims		Rural* Claims	
	Male	**Female**	**Male**	**Female**
<18 years	20	9	7	1
18 - 29 years	3	13	3	5
30 - 39 years	12	29	11	18
40 - 49 years	23	51	6	20
50 - 59 years	44	67	11	31
60+ years	7	15	1	0

**Outside of Ahmedabad City*

	Average Estimated Cost (INR)	Average Percent of Cost Approved
Urban	7580	67.10%
Rural*	9328	42.20%

**Outside of Ahmedabad City*

District	Average Estimated Cost (INR)	Average Amount Approved (INR)	Average Percent of Cost Approved
Ahmedabad City	7580	3201	67.10%
Ahmedabad District	11401	4996	49.60%
Anand	8731	1360	29.60%
Baroda	4250	0	0%
Gandhinagar	19148	5667	38.60%
Kerala	12684	992	10.70%
Kheda	8244	1300	31.80%
Kutch	3346	1600	50.22%
Mehsana	4565	1600	38.80%
Sabarkantha	4637	1367	33.20%

Disease Category	Urban Claims	Rural Claims*
Abcess	6	1
Abdominal Pain	2	3
Alcohol Related Illness		1
Anemia		2
Appendicitis	1	1
Blood Pressure	30	5
Cancer	3	3
Cardiovascular Problem	21	1
Convulsion	1	1

Disease Category	Urban Claims	Rural Claims*
Diabetes	14	1
Ear Problem	1	
Eye Problem	59	19
Fever	70	19
Fracture/Bone/Injury	15	10
Gall Bladder Problem	3	1
Gastroenteritis	22	8
Gynecological	10	8
Hernia	1	1
Infection	2	
Kidney Problem	6	2
Liver Problem	9	1
Lung Disease	5	1
Malaria	4	8
Muscle Problem	1	
Pain	3	
Pancreatic Problem	2	
Psychotic Illness	1	
Rectal Problem	1	1
Respiratory Infection	21	7
Skin Problem		1
Spinal Problem	1	
Stone	1	2
Surgical Procedure	2	2
Swelling		2
Throat Problem		1
Thyroid Problem	2	1

Disease Category	Urban Claims	Rural Claims*
Tuberculosis	8	0
Urinary/Bladder Problem	4	3
Vertigo	1	1
Water Borne Disease	4	4

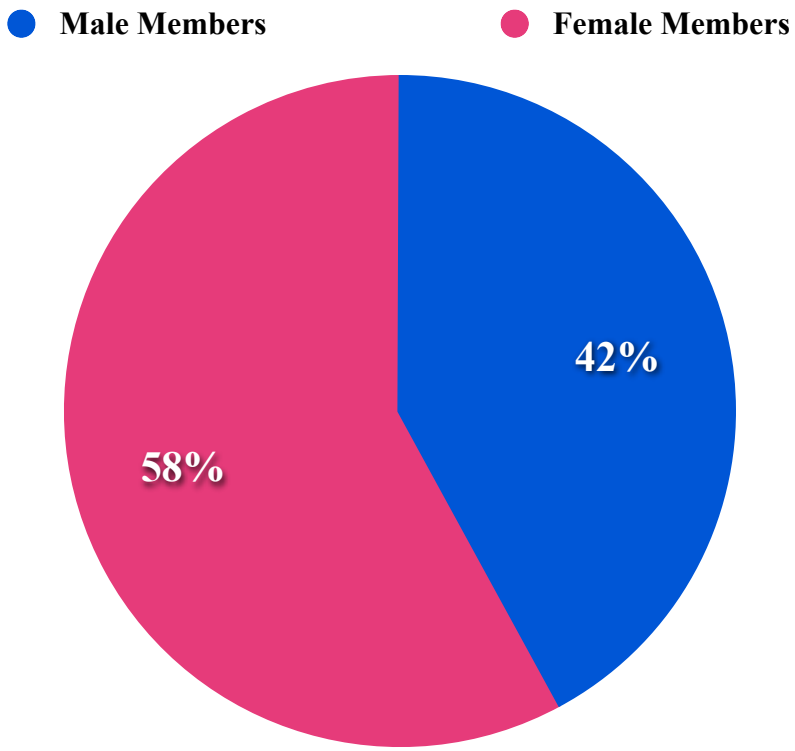
**Outside of Ahmedabad City*

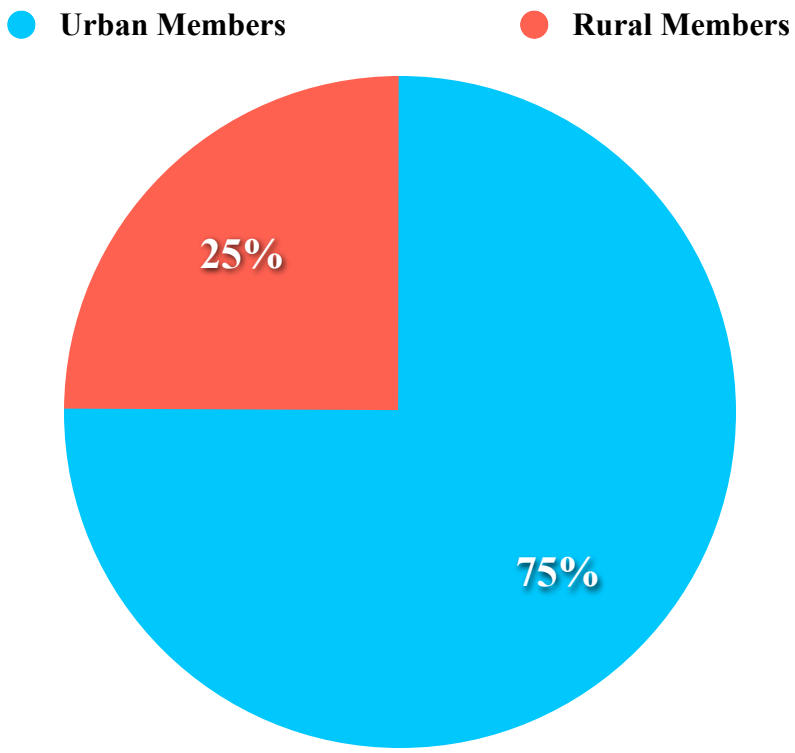
Distribution of Swastha Parivar Memberships

	Male	Female
Primary Members	119	913
Secondary Members	513	4
Child	77	58
Total	709	975

	Primary Members	Secondary Members	Child	Total
<18 years	0	0	74	74
18 - 29 years	116	31	0	147
30 - 39 years	225	86	0	311
40 - 49 years	386	200	0	586
50 - 59 years	304	183	0	487
60+ years	18	17	0	35

	Urban	Rural
Households	775	257


Male Members
Female Members
42%
58%


Urban Members
Rural Members
25%
75%